

**THE HONEY ANT MYRMECOCYSTUS MELLIGER AT
SAN ANTONIO, TEXAS.**

BY H. B. PARKS, State Apicultural Research Laboratory, San Antonio, Texas.

As the majority of papers relative to the honey ant (*Myrmecocystus horti-deorum*) describe a species which is common to the Mountainous Regions of the Southern Rockies it was rather interesting to find honey ants very common all over the Rio Grande Plain of Southwest Texas. Neither Wheeler or McCook mention *M. horti-deorum* as being found in Texas and Wheeler in speaking of eight sub-species of *M. melliger* does not mention the finding of repletes in their nests. Some five years ago a nest was discovered in a gravel-pit near this Laboratory. A cave-in exposed a section of wall some twelve feet in height. The split revealed a longitudinal section of a large nest of honey ants. The ants entered a hole in the loose gravel near the tap-root of a Brazil bush (*Condalia obovata* Hook) and their tunnel followed the tap root downward for about four feet. At this point they had a number of galleries containing ants in all stages of development. There were no indications of stores in this part of the nest. From the lower part of this system of galleries a tunnel continued downward in as nearly a straight line as the large gravels would permit. At ten feet there were a few galleries and at twelve feet the tunnel entered a layer of soft yellow sand. Here was a space of about four or five cubic feet which was filled with galleries containing repletes in all stages of fullness. These galleries were hemispherical in form both of ceiling and floor. The diameter of the hemisphere was about four inches, the distance between the ceiling and floor being about three-eighths of an inch. This enabled the worker ants standing on the floor to care for the repletes which hung from the ceiling. Each gallery contained about fifty repletes. No sooner had the discovery been made than the Mexicans who were loading sand and gravel took charge of things and it was with difficulty that I obtained a sufficient number of repletes to prove the discovery of honey ants at San Antonio. It was rather comical to see the Mexican laborers standing around, each one with a handful of repletes and eating them very much as one would eat strawberries. They would place the abdomen of the honey ant in their mouths, bite off the head and thorax

which was then discarded. I believe the total number of repletes taken from this nest would have been close to a gallon. The repletes were filled with a thick dark amber honey which very much resembled the Brazil honey stored by honey bees. Having become familiar with this ant a close lookout was made for the nests and they were found in abundance. In fact, this ant is one of the common species from the Edwards Escarpment to the Rio Grande River. It is found wherever Brazil (*Condalia obovata* Hook), Lote (*Zizyphus obtusifolia* Gray) and Colubrina (*Colubrina texensis* Gray) are found. The nests are located in almost any kind of a place. Near San Antonio they are found in the chalk hills among the rocks, on the flat land in soft dirt, and in the timber under the roots of trees. A very close watch has been made of this ant during the past five years and we have found that it obtains its honey almost altogether from the shrubs mentioned above. It could not obtain the honey from the galls of oak as in many places the nests are miles from the nearest oak trees. The insects work on the cloudy days so one has an ample opportunity of studying their honey gathering ability. When the shrubs mentioned are in bloom the plants will be very heavily infested with these ants, each one at work on the exposed nectaries. It is to be said that in digging out nests of this species that very often cavities are found which are completely filled with grass seeds and quite often the ants are seen carrying the seed of Colorado grass into their nests.

Mr. A. K. Boyles, taxidermist of the Witte Memorial Museum of San Antonio has succeeded in transferring the honey ants to formicaries with glass fronts. These were placed on exhibit in the Museum. As the ants placed in the boxes contained no repletes he placed a dish containing a mixture of sugar and water in the box. In three days he had a number of completely filled repletes. The replete filled with the clear liquid made a very curious appearance as the abdomen walls were so thin that one could not see them and it appeared as though the head and thorax of the replete was standing out by itself. The sugar and water solution evidently did not agree with the honey ants as three of them burst without any apparent reason. Honey in its natural condition was substituted for the sugar syrup. The ants continued to make repletes and have done so until the number of repletes outnumber the workers. Any form of the worker will become a replete. In this cage there are numbers of various sizes of re-

pletes, all of them full fed. As nearly as can be determined without material for comparison this species is *Myrmecocystus melliger*.¹

There is a relationship between the honey ant and the coyote (*Canis nebrascensis texensis* Bailey) which appears to be constant and to be well known throughout Southwest Texas. This relationship may be stated as follows: The coyote either digs out the nest of the honey ant for the repletes and afterwards uses the hole as a den or the honey ants find the abundant dens of coyotes and occupy them during the summer period because of the softness of the dirt which has been washed in and fills the cavity in the hard soil made by a former occupant of the den. The actually observed facts are as follows: Any new excavation made by coyotes will be found to follow the excavation made by honey ants. Honey ants' nests are frequently found in deserted coyote dens. As it seemed improbable that an animal of the wolf tribe would be attracted by the sugar syrup of the repletes, the work of digging out the honey ant nests was first attributed to armadillos. A very careful watch has proven that the work was done by the coyotes.

Uncommon Coleoptera.—On October 12, 1928, while shaking out piles of partly dried grass and weeds over the sifting cloth in Framingham, Mass., I took three specimens of *Xestipyge geminatum* Lec. I had never seen but one specimen of this before; it was taken by Mr. S. A. Shaw at Hampton, N. H., on April 13, 1924.

Under these same piles of grass I took three specimens of *Corticaria varicolor* Fall. The identity was established through the kindness of the describer, Mr. H. C. Fall, who stated that he had taken the species on Nantucket Island, and had not previously seen the species from Massachusetts. A single specimen was recently found in material taken by sifting at Nantucket by Mr. J. H. Emerton in May, 1928.—C. A. FROST, Framingham, Mass.

¹ Determined by Dr. W. M. Wheeler as *Myrmecocystus melliger* subsp. *orbiceps* Wheeler.